AMENDMENTS TO THE CLAIMS

1. (Currently Amended) An image processing method for processing a pixelised image, the method comprising the steps of:

analyzing pixel data representative of said pixelised image in a ~~colour~~ color space and based ~~thereon~~ thereon, determining a gray axis defined as a straight line connecting a white point with a black point;

determining for each pixel of said pixelised image ~~the~~ a shortest distance to said gray axis;

forming a cumulative histogram by plotting for the pixels of said pixelised image a value of said shortest distance versus a cumulative pixel count being the number of associated pixels having at least said value of said shortest distance; and

analyzing a relationship between the pixels in said cumulative histogram and based thereon judging whether said pixelised image is to be processed as a monochrome image or a ~~colour~~ color image.

2. (Original) The method as recited in claim 1, wherein in the step of analyzing the relationship between the pixels in said cumulative histogram, only the pixels of said cumulative histogram having an associated cumulative pixel count value equal to or greater than a predetermined threshold are taken into account.

3. (Currently Amended) The method as recited in claim 1, wherein in the ~~analyzing step,~~ step of analyzing a relationship between the pixels in said cumulative histogram, the relationship between the pixels in said cumulative histogram is determined by applying a linear regression analysis to said pixels in said cumulative histogram.

4. (Currently Amended) The method as recited in claim 3, wherein the step of judging whether said pixelised image is to be processed as a monochrome image or a ~~colour~~ color image is based on a result of comparing a value of at least one regression parameter with a predetermined threshold value of said at least one regression parameter.

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5. (Currently Amended) The method as recited in claim 4, wherein said at least one regression parameter is selected from a group of parameters comprising:

a correlation coefficient (R),

a coefficient of determination (R^2),

a slope of a regression line, and

an intercept of the regression line.

6. (Currently Amended) The method as recited in claim 1, further comprising the step of:

converting said pixel data representative of said pixelised image in said ~~colour~~ color space to pixel data representative of said pixelised image in a CIE ~~colour~~ color space.

7. (Original) The method as recited in claim 1, wherein the judging step judges based on whether or not there is a linear relationship between the value of said shortest distance and the cumulative pixel count for the pixels of said pixelised image.

8. (Currently Amended) The method as recited in claim 7, wherein the judging step judges ~~that~~ whether said pixelised image is a monochrome image if the linear relationship exists.

9. (Currently Amended) The method as recited in claim 7, wherein the judging step judges that said pixelised image is a ~~colour~~ color image if the linear relationship does not exist.

10. (Currently Amended) An image processing system for processing a pixelised image, the system comprising:

a pre-processor for analyzing pixel data representative of said pixelised image in a ~~colour~~ color space and based thereon determining a gray axis defined as a straight line connecting a white point with a black point, and determining for each pixel of said pixelised image the shortest distance to said gray axis;

an analyzer for analyzing a relationship between the pixels of said pixelised image in a

cumulative histogram, said cumulative histogram being formed by plotting for the pixels of said pixelised image a value of said shortest distance versus a cumulative pixel count being the number of associated pixels having at least said value of said shortest distance; and

a judging unit for judging, based on said relationship between the pixels in said cumulative histogram, whether said pixelised image is to be processed as a monochrome image or a ~~colour~~ color image.

11. (Original) The system as recited in claim 10, further comprising:

a fitting unit wherein the relationship between the pixels in said cumulative histogram is determined by applying a linear regression analysis to said pixels in said cumulative histogram.

12. (Currently Amended) The system as recited in claim 10, further comprising:

a converter <u>for</u> converting said pixel data representative of said pixelised image in said ~~colour~~ <u>color</u> space to pixel data representative of said pixelised image in a CIE ~~colour~~ <u>color</u> space.

13. (Original) The system as recited in claim 10, wherein the analyzer takes into account only the pixels of said cumulative histogram having an associated cumulative pixel count value equal to or greater than a predetermined threshold.

14. (Original) The system as recited in claim 10, wherein the judging unit judges based on a result of comparing a value of at least one regression parameter with a predetermined threshold value of said at least one regression parameter.

15. (Original) The system as recited in claim 14, wherein said at least one regression parameter is selected from a group of parameters comprising:

a correlation coefficient (R),

a coefficient of determination (R^2),

a slope of a regression line, and

an intercept of the regression line.

16. (Original) The system as recited in claim 10, wherein the judging unit judges based on whether or not there is a linear relationship between the value of said shortest distance and the cumulative pixel count for the pixels of said pixelised image.

17. (Original) The system as recited in claim 16, wherein the judging unit judges that said pixelised image is a monochrome image if the linear relationship exists.

18. (Currently Amended) The system as recited in claim 16, wherein the judging step judges that said pixelised image is a ~~colour~~ color image if the linear relationship does not exist.

19. (Original) The system as recited in claim 10, further comprising:
a scanner to scan an original image to provide said pixelised image.